

### **Temporal and Spatial Vocal Patterns of Killer Whales at the Pribilof Islands**

**Kelly Ann Newman**, University of Alaska Fairbanks, k.newman@sfos.uaf.edu

Alan Springer, University of Alaska Fairbanks, ams@ims.uaf.edu

Craig O. Matkin, North Gulk Oceanic Society, contact@whalesalaska.org

Waters surrounding the Pribilof Islands are a foraging hot spot for mammal eating killer whales, which come there every summer to feed on abundant fur seals. To delve into predator-prey interactions between killer whales and fur seals, we monitored killer whale visitation patterns in the vicinity of the islands using moored marine autonomous acoustic recorders. One recorder was deployed near St. Paul I. for 21 days in June-July 2006, two were deployed near St. Paul I. for 60 days in June-August 2008 and two were deployed near St. George I. for 38 days in July-August 2008. Vocalization patterns were compared to ascertain temporal and geographic visitation patterns, predation behavior, and diurnal activity near fur seal rookeries. We found matches of several call types between 2006 and 2008 at St Paul I., indicating the same groups of killer whales returned to the area. There was one call match between St Paul I. and St George I., but fewer calls were detected at St George I. than St Paul I. This could be due to the smaller number of fur seals at St George I., seasonal differences in killer whale visitation, or oceanographic conditions that affected call propagation and detection capabilities. Vocalizations of whales at St Paul I. were also compared to those from other regions in Alaska, and bore the closest structural resemblance to calls produced by whales recorded near False Pass, Alaska, another foraging hot spot in the southeastern Bering Sea.

Student Presentation